

**FINAL**

**Solar Working Group**

April 16, 2014

5:30-7:30pm, West Boulder Senior Center

**ATTENDEES:**

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- **City** – Kelly Crandall, Karl Guiler, Brett KenCairn, Lisa Smith
- **Working Group** – Ken Gamauf, Ken Regelson, Matt Lehrman, Paul Melamed, Phil Wardwell, David Kline, Dave Hatchimonji, John Street, Todd Stewart, Tim Schoechle, Jim Hartman, Lynn Segal

**MEETING NOTES:**

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**1. Update on Proposed Code Changes Related to Local Solar and Wind (Karl Guiler)**

Karl introduced code changes that the city is considering related to local solar and wind. Currently renewable energy sources are considered accessory uses, i.e., incidental. The purpose of these changes is to create consistency to facilitate local access to renewable resources, without creating problems related to views, glare, aesthetics, and other concerns. This proposal also includes regulations related to wind energy systems based on model ordinances throughout the country. Under the proposed regulations, solar would become an acceptable use in all zoning areas; community solar gardens would be permitted uses; and there would be performance standards related to height, setbacks, and coverage limits. Staff is considering allowing reductions in open space requirements when installing solar. The group was provided a one-page summary of proposed changes. They offered this feedback:

- Jim suggested that it could be possible to include solar arrays in open space as, e.g., solar shades, or a shared use with grazing. Land access is the hardest part of solar garden development.
- Jim noted that market forces will drive solar arrays toward industrial zones, such as brownfields. Ken added that solar should be encouraged in flood zones and brownfields.
- Phil requested that the city do more to promote standardized permitting. Karl said that the intent of the standards is to lead to more over-the-counter permitting. The city is evaluating participating in Solar Friendly Communities and might consider things like allowing someone to sign an affidavit that the code has been met and then the inspector confirms that, to reduce inspection time. Jim suggested over-the-counter permitting for systems smaller than 500 kW, not the current 10 kW.
- John noted that the suggested standards related to, for example, rooftop height limitations seem generous.
- Dave H. said Boulder County is looking to convene building officials throughout the county to develop consistency on permitting, including online permitting options, to reduce soft costs.
- Karl said that he has worked with one prior working group of installers and while this is not a priority in that Council has requested it by a certain date, he could put together a subgroup if there was interest.

## 2. Presentation/Q&A on On-Bill Financing Opportunities (John Street)

John provided a presentation on on-bill repayment and on-bill financing for solar and energy efficiency improvements. On-bill financing is financed by the utility and on-bill repayment is financed by a third party; both are repaid on customers' bills. The default rate tends to be very low because (1) bill neutrality is a goal—savings should equal or exceed the loan payments, and (2) if the homeowner or business stops repayment, service can be shut off. Significant aspects of OBF program design include:

- **Transferability.** It can be beneficial to have the repayment assigned to the meter rather than the customer, so that it stays with the real property. Neither Fort Collins nor California examples have included transferability.
- **Interest Rates.** If it is financed externally, it is subject to the market.
- **Scale.** There needs to be a lot of potential business to interest a third-party financier. Boulder might be too small of a market for major banks, but perhaps could piggyback off existing programs (e.g., Fort Collins) or look at local banks, crowdsourcing, internal funding.
- **Loan Term.** 10 years or less may be short for creating bill neutrality.
- **Standardization.** It is useful to have a standard model for calculating cost-benefit so that contractors can work with customers.
- **Ease of Application.** The loan process can be simple for residents (look at FICO for homeowners) but there may not be a good way to avoid due diligence for businesses taking longer.
- **Awareness.** It can be difficult to build awareness of OBF as an option if there are other loan products that incentivize contractors to get customers to participate in them.

The group had the following feedback:

- The group discussed due diligence for larger/commercial projects. It matters if those projects are creditworthy. On the other hand, the utility can look at its bill history and if the bill is neutral, it may be possible to consider a customer creditworthy without a credit review process. Todd suggested that credit checks for small solar can be a barrier and creates high transaction costs for many small project reviews. Jim noted that community solar could be considered "default proof" because if a customer stops paying, their share can be reassigned along with the bill credit; Todd suggested that community solar gardens with virtual net metering and OBF could be an excellent combination. David emphasized that an OBF program should be transparent if city/utility funds are at risk.
- There are landlord issues related to OBF. If a business defaults and a new business moves in, the loan could be tied to the meter and the new tenant. Jim noted that it could make it harder to re-lease the property, but this is more of a perception issue if the bills are neutral.
- There is a limit to loan amounts, generally 30-50% of project costs due to debt service coverage requirements. Todd noted that this makes Property Assessed Clean Energy (PACE) programs more attractive because they could get closer to full financing using state funds. Alternatively, leasing companies, which are unregulated, could be considered.
- For solar gardens, there would need to be enough interest to fill them out or enough load at local meters on the part of the lender (i.e., a credit union or a local utility).
- Overall, the group emphasized that you need a diversity of programs for customers to choose from to encourage local solar and build resilience.

### **3. Update on Xcel's PUC Application to Change Solar and DSM in Boulder (Kelly Crandall)**

The proceeding has been scheduled for answer testimony in June and a hearing in August. The group may be asked to provide feedback on reasonable approaches to this proceeding. Xcel and Boulder may be able to work on a settlement, which would be confidential and could not be discussed with the group. The group discussed these issues:

- Does the Boulder community want or need solar renewable energy credits (RECs)? It may be possible to transfer solar RECs that are for pay-for-production systems to Xcel using the western states' REC-tracking system. A different approach might be required for systems where the RECs were paid for upfront. Because the city currently lacks information on how many systems locally are Solar\*Rewards participants and at what REC payment level, participants suggested working with eGauge for aggregated data or conducting a survey. Another option besides REC transfers is to take over REC payments for existing systems.
- Paul thought most people were banking excess solar rather than cashing out credits; Matt said his experience was that most people did not generate much excess.
- The group suggested looking at legislative options to maximize local access to solar.

### **4. Miscellaneous Updates**

#### **a. Solar Friendly Communities Analysis**

A city staff team is looking at Solar Friendly Communities. Boulder is probably at the "silver" level but may be able to make a few small changes to be "gold," with a goal of getting to "platinum." The group suggested that this should be publicized.

#### **b. Solar Grants Evaluation**

Kelly shared that the group will be asked to provide feedback on potential changes to the Solar Grants program, which provides funding to residents in affordable housing and nonprofits. The group will be asked, in particular, about how to measure program effectiveness, application processes, and the best way to maximize grant dollars given the changing marketplace. This will probably be discussed on Basecamp prior to a May meeting. Jim and Ken suggested looking at developing a low-income solar garden and Todd suggested partnering with GRID Alternatives.

#### **c. PUC Net Metering Discussion Update and Solar\*Connect Program Filing**

Kelly provided a short update on Colorado Public Utilities Commission (PUC) activities related to solar. The PUC held an informational meeting to get suggestions on what proceeding would be appropriate to discuss the costs and benefits of net metering, and what should be considered. Boulder is working with other metro area governments to develop guiding principles, such as increasing customer access to solar overall and transparency with regard to how different programs are treating net metering. Additionally, Xcel recently filed an application for approval of a program ("Solar\*Connect") that would offer customers partial net metering credit in exchange for paying a premium to fund a new utility-scale solar power purchase agreement.

- The group asked if the PUC is considering “value of solar” or similar; PUC participants have suggested looking at factors that comprise the “value of solar” methodology but net metering is currently state law.
- There were comments that the net metering discussion has created a false emergency; the bigger picture is that it is important to look at environmental and human health and we should be looking for how to generate as much renewable energy as possible rather than debating small fees. Tim suggested looking at a 2009 RW Beck study on the benefits of renewable energy. Ken recalled the Amendment 37 preamble to develop renewable resources to the “maximum practicable extent,” which is also in the PUC electric rules at Rule 3651. Brett suggested developing a hierarchy of priorities with climate change as critical.
- David pointed out that city staff will still need guidance as to “making the sausage” of developing the solar value.
- Paul asked what could be done in the next few years prior to the formation of a municipal utility. The group discussed whether it would be possible to work within the current framework (PUC and Xcel) or if there are options the city could do individually. Some group members suggested that the city could encourage solar and storage pairings through local regulation. Tim said that new, smart inverters can be combined with storage. The city could incentivize storage behind-the-meter to get close to zero-consumption on premises.
- With regard to Solar\*Connect, some members commented that it is not well-defined and so it is difficult to react. The virtual net metering credit customers would receive could change often.
- Group members expressed frustration that utilities’ advertising about and discussions of net metering tend to imply rooftop solar is wrong or bad in comparison to utility-scale solar. Customers should have lots of options to get solar, within and outside utility programs.

## **5. Opportunities Analysis Matrix and Next Steps for Working Group**

There seemed to be a general consensus that a May meeting would be useful. Among the next steps include:

- Scheduling a meeting in May to discuss the Solar Grants evaluation, PUC activities, etc. There may be the option to do a Council briefing in May or July, along with the Natural Gas Working Group. This briefing would present the group’s findings from the opportunities analysis and other conclusions or recommendations.
- The group may be interested in (1) the Climate Commitment discussion, which is moving toward envisioning a fossil-fuel-free future; (2) the May 13 Council briefing on the municipal utility transition plan; (3) a joint working group meeting tentatively scheduled for June 11.
- Kelly will send out a doodle poll to schedule the May meeting.